WEST Search History

DATE: Tuesday, November 12, 2002

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=ADJ			
L18	'bp 6479' or bp6479	0	L18
L17	L16	0	L17
DB=JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ			
L16	'bp 6479' or bp6479	0	L16
L15	l13 and L14	12	L15
L14	corynebacter$5 or brevibacter$5	4217	L14
L13	l11 and L12	226	L13
L12	resist$5 or insensitiv$4 or immun$4	1646181	L12
L11	lysozyme or muramidase	2076	L11
DB=USPT; PLUR=YES; OP=ADJ			
L10	'met cys gly leu leu gly ile leu' or metcysglyleuleuglyileuleu$ or mcgllgil$	0	L10
L9	l3 same l8	9	L9
L8	corynebacter$5 or brevibacter$5	5667	L8
L7	(l1 same l2) and l4 not l5	33	L7
L6	4681847	7	L6
L5	l3 and L4	69	L5
L4	l1.ti,ab,clm.	441	L4
L3	l1 with L2	350	L3
L2	resist$5 or insensitiv$4 or immun$4	1084793	L2
L1	lysozyme or muramidase	8093	L1

END OF SEARCH HISTORY

WEST Search History

DATE: Tuesday, November 12, 2002

Set Name side by side	Query	Hit Count	Set Name result set
DB=USOC; PLUR=YES; OP=ADJ			
L14	l10 and l1 not l11	2	L14
L13	'met cys gly leu leu gly ile leu' or metcysglyleuleuglyileuleu$ or mcgllgil$	0	L13
L12	'bp 6479' or bp6479	0	L12
L11	l1 and L10 and l7	2	L11
L10	corynebacter$5 or brevibacter$5	747	L10
L9	l1 same L7 not l8	19	L9
L8	l1 with L7	5	L8
L7	resist$5 or insensitiv$5 or immun$4	630713	L7
L6	resist$5 or insensitiv$5 or immun$4	630521	L6
L5	resist$5 or insensitiv$5 or immun$4	629466	L5
L4	resist$5 or insensitiv$5 or immun$4	619076	L4
L3	resist$5 or insensitiv$5 or immun$4	556638	L3
L2	resist$5 or insensitiv$5 or immun$4	539311	L2
L1	lysozyme or muramidase	118	L1

END OF SEARCH HISTORY

08nov02 10:52:43 User208600 Session D1539.1
File 155:MEDLINE(R) 1966-2002/Nov W1

Set Items Description
--- ----- ---------

Ref Items RT Index-term
E1 1 LYSOZYMBESTIMMUNGEN
E2 1 LYSOZYMBILDUNG
E3 12117 1 *LYSOZYME
E4 1 LYSOZYME C, ZEBRAFISH
E5 1 LYSOZYME-GLUCOSE STEARIC ACID MONOESTER
E6 1 LYSOZYMED
E7 1 LYSOZYMEINFLUSS
E8 3 LYSOZYMELIKE
E9 1 LYSOZYMEMIA
E10 2 LYSOZYMEN
E11 667 LYSOZYMES
E12 1 LYSOZYME1

Ref Items Type RT Index-term
R1 12117 1 *LYSOZYME
R2 13729 X 3 MURAMIDASE

Ref Items Type RT Index-term
R1 13729 3 *MURAMIDASE
R2 13570 X DC=D8.586.277.450.642. (MURAMIDASE)
R3 12117 X 1 LYSOZYME
R4 9509 B 44 GLYCOSIDE HYDROLASES

Ref Items Type RT Index-term
R1 9509 44 *GLYCOSIDE HYDROLASES
R2 9509 X DC=D8.586.277.450. (GLYCOSIDE HYDROLASES)
R3 1597 X 1 GLYCOSIDASES
R4 5235 N 4 ACETYLGLUCOSAMINIDASE
R5 2684 N 4 ALPHA-AMYLASE
R6 817 N 2 ALPHA-GALACTOSIDASE
R7 2235 N 4 ALPHA-GLUCOSIDASES
R8 759 N 4 ALPHA-L-FUCOSIDASE
R9 13059 N 5 AMYLASES
R10 185 N 2 BETA-AMYLASE
R11 12226 N 4 BETA-GALACTOSIDASE
R12 1802 N 3 BETA-GLUCOSIDASE

S1 13570 DC='D8.586.277.450.642.' (MURAMIDASE)
S2 9509 DC='D8.586.277.450.' (GLYCOSIDE HYDROLASES)
S3 8112 CORYNEBACTER? OR BREVIBACTER?
S4 819444 RESIST? OR INSENSITIV? OR IMMUN?
S5 11 (S1 OR S2) AND S3 AND S4
S6 34 (S1 OR S2) AND S3 NOT S5
S7 108 PURF
S8 0 S7 AND S3
S9 0 (S1 OR S2) AND S7

Ref Items RT Index-term
E1 1 GLUTAMATDELHYDROGENAZY
E2 1 GLUTAMATDGIDROGENAZY
E3 49133 1 *GLUTAMATE
E4 3818 GLUTAMATE //RECEPTORS, (RECEPTORS, GLUTAMATE)
E5 2108 GLUTAMATE //RECEPTORS, METABOTROPIC (RECEPTORS, METABOTROPIC GLUTAMATE)
E6 986 GLUTAMATE //SODIUM (SODIUM GLUTAMATE)
E7 24 GLUTAMATE ACETYLTRANSFERASE
E8 0 1 GLUTAMATE AGENTS
E9 0 1 GLUTAMATE AGONISTS
E10 4 GLUTAMATE AMINOTRANSFERASE
E11 0 1 GLUTAMATE ANTAGONISTS
E12 0 1 GLUTAMATE CARBOXY-LYASE

Ref Items Type RT Index-term
R1 49133 1 *GLUTAMATE
R2 15928 X 12 GLUTAMIC ACID

Ref Items Type RT Index-term
R1 15928 12 *GLUTAMIC ACID
R2 15928 X DC=D12.125.119.450. (GLUTAMIC ACID)
R3 15928 X DC=D12.125.67.750. (GLUTAMIC ACID)
R4 15928 X DC=D14.600.50.200.300. (GLUTAMIC ACID)
R5 49133 X 1 GLUTAMATE
R6 3818 R 12 RECEPTORS, GLUTAMATE
R7 6 B 12 AMINO ACIDS, ACIDIC
R8 429 B 17 AMINO ACIDS, DICARBOXYLIC
R9 753 B 6 EXCITATORY AMINO ACIDS
R10 19134 N 9 GLUTAMATES
R11 663 N 5 POLYGLUTAMIC ACID
R12 986 N 7 SODIUM GLUTAMATE

S10 15928 DC='D12.125.119.450.' (GLUTAMIC ACID)
S11 49 S3 AND S10

Ref Items RT Index-term
E1 4 ASPARTATE AMINOTRANSFERASES --ULTRASTRUCTURE -
E2 91 ASPARTATE AMINOTRANSFERASES --URINE --UR
E3 0 *ASPARTATE AMMONIA LIGASE
E4 120 4 ASPARTATE AMMONIA-LYASE
E5 6 ASPARTATE AMMONIA-LYASE --ANALYSIS --AN
E6 10 ASPARTATE AMMONIA-LYASE --ANTAGONISTS AND INHI
E7 10 ASPARTATE AMMONIA-LYASE --BIOSYNTHESIS --BI
E8 1 ASPARTATE AMMONIA-LYASE --BLOOD --BL
E9 16 ASPARTATE AMMONIA-LYASE --CHEMISTRY --CH
E10 2 ASPARTATE AMMONIA-LYASE --DRUG EFFECTS --DE
E11 27 ASPARTATE AMMONIA-LYASE --GENETICS --GE
E12 15 ASPARTATE AMMONIA-LYASE --ISOLATION AND PURIFI

Ref Items RT Index-term
E1 16 ASPARTATE 4-DECARBOXYLASE
E2 14 ASPARTATE-ALPHA-DECARBOXYLASE
E3 0 *ASPARTATE-AMMONIA LIGASE
E4 198 3 ASPARTATE-AMMONIA LIGASE
E5 1 ASPARTATE-AMMONIA LIGASE --ADMINISTRATION AND
E6 9 ASPARTATE-AMMONIA LIGASE --ANALYSIS --AN
E7 29 ASPARTATE-AMMONIA LIGASE --ANTAGONISTS AND INH
E8 31 ASPARTATE-AMMONIA LIGASE --BIOSYNTHESIS --BI
E9 1 ASPARTATE-AMMONIA LIGASE --BLOOD --BL
E10 15 ASPARTATE-AMMONIA LIGASE --CHEMISTRY --CH
E11 3 ASPARTATE-AMMONIA LIGASE --CLASSIFICATION --CL
E12 85 ASPARTATE-AMMONIA LIGASE --GENETICS --GE
E13 5 ASPARTATE-AMMONIA LIGASE --IMMUNOLOGY --IM
E14 20 ASPARTATE-AMMONIA LIGASE --ISOLATION AND PURIF
E15 99 ASPARTATE-AMMONIA LIGASE --METABOLISM --ME
E16 1 ASPARTATE-AMMONIA LIGASE --PHYSIOLOGY --PH
E17 1 ASPARTATE-AMMONIA LIGASE --RADIATION EFFECTS -
E18 1 ASPARTATE-AMMONIA LIGASE --ULTRASTRUCTURE --UL
E19 16 ASPARTATE-GLUTAMATE CARRIER
E20 110 ASPARTATE-L-ISOASPARTATE METHYLTRANS //PROTEIN (PROTEIN D-ASPARTATE-L-ISOASPARTATE METHYLTRANS)
E21 89 3 ASPARTATE-SEMIALDEHYDE DEHYDROGENASE
E22 3 ASPARTATE-SEMIALDEHYDE DEHYDROGENASE --ANALYSI
E23 6 ASPARTATE-SEMIALDEHYDE DEHYDROGENASE --ANTAGON
E24 10 ASPARTATE-SEMIALDEHYDE DEHYDROGENASE --BIOSYNT

Ref Items Type RT Index-term
R1 198 3 *ASPARTATE-AMMONIA LIGASE
R2 198 X DC=D8.586.464.259.200.200. (ASPARTATE-AMMONIA LIGASE)
R3 0 X 1 ASPARAGINE SYNTHASE
R4 23 B 4 AMIDE SYNTHASES

Ref Items Type RT Index-term
R1 23 4 *AMIDE SYNTHASES
R2 23 X DC=D8.586.464.259.200. (AMIDE SYNTHASES)
R3 164 B 14 CARBON-NITROGEN LIGASES
R4 198 N 3 ASPARTATE-AMMONIA LIGASE
R5 2647 N 3 GLUTAMATE-AMMONIA LIGASE

S12 85 'ASPARTATE-AMMONIA LIGASE --GENETICS --GE'
S13 198 DC='D8.586.464.259.200.200.' (ASPARTATE-AMMONIA LIGASE)
S14 1 S3 AND S13
S15 17479 MURAMIDASE OR LYSOZYME
S16 2981 S15 AND S4
S17 21 S16 AND S3
S18 10 S17 NOT S5

5/6/1 13733953 22182153 PMID: 12194450
Antibacterial activity in four marine crustacean decapods. May 2002

5/6/2 09942386 98375491 PMID: 9709760
The effect of successful contact lens wear on mucosal immunity of the eye. Aug 1998

5/6/3 09859814 98300639 PMID: 9637010
New shuttle vectors for Rhodococcus sp. R312 (formerly Brevibacterium sp. R312), a nitrile hydratase producing strain. 1998

5/6/4 04778349 85157454 PMID: 3980445
High-frequency transformation of Brevibacterium lactofermentum protoplasts by plasmid DNA. Apr 1985

5/6/5 03680028 81219025 PMID: 6941048
Effect of immunotherapy with Corynebacterium parvum and methanol extraction residue of BCG administered intravenously on host defense function in cancer patients. Jun 1981

5/6/6 03136643 79209737 PMID: 256515
Isolation procedure and properties of monomer unit from lysozyme digest of peptidoglycan complex excreted into the medium by penicillin-treated Brevibacterium divaricatum mutant. Jun 12 1979

5/6/7 02979125 79047999 PMID: 711553
Lysozyme levels and macrophage content of tumor tissue in C3H mice bearing fibrosarcoma transplants treated by radiation and Corynebacterium parvum. Sep-Oct 1978

5/6/8 02851251 78167078 PMID: 647625
Monocyte function in patients with solid neoplasms during immunotherapy with Corynebacterium parvum. May 1978

5/6/9 02272807 76132953 PMID: 766528
Condition of microflora of the nasopharynx in immunization with live influenza vaccine for oral administration]
Sostoianie mikroflory nosoglotki pri immunizatsii zhivoi grippoznoi vaktsinoi dlia peroral'nogo vvedeniia Jul 1975

5/6/10 01661888 73210318 PMID: 4197668
Adjuvants and the reticuloendothelial system. The recall phenomenon of the stimulatory effects of adjuvants with homologous antigen. Dec 1972

5/6/11 00930929 70138111 PMID: 5434449
Some biochemical aspects of the immune macrophage. Feb 1970

5/5/4 DIALOG(R)File 155:MEDLINE(R) 04778349 85157454 PMID: 3980445
High-frequency transformation of Brevibacterium lactofermentum protoplasts by plasmid DNA.
Santamaria R I; Gil J A; Martin J F
Journal of bacteriology (UNITED STATES) Apr 1985, 162 (1) p463-7,ISSN 0021-9193 Journal Code: 2985120R Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM
Record type: Completed Subfile: INDEX MEDICUS
An efficient polyethylene glycol-assisted method for transformation of Brevibacterium lactofermentum protoplasts that uses plasmid vectors hasbeen developed. Two small plasmids, pUL330 (5.2 kilobases) and pUL340 (5.8kilobases), both containing the kanamycin resistance gene from transposonTn5 and the replication origin of the natural plasmid pBL1 of B.lactofermentum, were selected as vectors. Supercoiled forms of the plasmids yielded a 100-fold higher transformation frequency than did linear forms. The optimal transformation frequency was achieved with 10 ng of DNA in 1 ml of transformation buffer. Higher concentrations of plasmid DNA resulted in a decrease in transformation frequency per microgram of DNA. Optimal transformation was obtained with 25 to 35% polyethylene glycol 6000. Under optimal conditions, 10(6) transformants per microgram of DNA were obtained.
Tags: Support, Non-U.S. Gov't Descriptors: Brevibacterium --genetics--GE; *Plasmids; *Transformation, Bacterial; Calcium--pharmacology--PD; Magnesium--pharmacology--PD; Muramidase--pharmacology--PD; Polyethylene Glycols--pharmacology--PD; Protoplasts; Temperature CAS Registry No.: 0 (Plasmids); 0 (Polyethylene Glycols); 7439-95-4 (Magnesium); 7440-70-2 (Calcium) Enzyme No.: EC 3.2.1.17 (Muramidase)
Record Date Created: 19850509

5/5/6 DIALOG(R)File 155:MEDLINE(R) 03136643 79209737 PMID: 256515
Isolation procedure and properties of monomer unit from lysozyme digestof peptidoglycan complex excreted into the medium by penicillin-treated Brevibacterium divaricatum mutant.
Keglevic D; Ladesic B; Tomasic J; Valinger Z; Naumski R
Biochimica et biophysica acta (NETHERLANDS) Jun 12 1979, 585 (2) p273-81, ISSN 0006-3002 Journal Code: 0217513 Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM
Record type: Completed Subfile: INDEX MEDICUS
1. The peptidoglycan complex excreted in large amounts into the medium by the biotin-requiring mutant Brevibacterium divaricatum NRRL-2311 incubated in the presence of penicillin for 1 h has been investigated. A convenient isolation procedure with high yield for the pure monomeric unit from lysozyme digest of the accumulated polymer is described. 2. It is shown that the released peptidoglycan possesses the linear uncross-linked structure made of repeating disaccharide-pentapeptide unit [GlcNAc-MurNac-Ala-D-Glyn(meso-DAP-D-Ala-D-Ala)] which was isolated by stepwise gel filtration and fractionation of the digestion mixture in 10-mg quantities. Evidence that the minor digestion product of accumulated peptidoglycan possesses the glycan-linked dimer structure is given. Under conditions of beta-elimination, the monomeric unit yielded a lactylpentapeptide which was isolated in pure form by gel filtration. 3. The monomer unit originating from the cultures to which L-[U-14C]glutamic acid was added simultaneously with penicillin incorporated the label exclusively in the peptide ch[illegible] whereas that labeled from E11-14C]acetate as the precursor contained radioactivity in both the peptide chain (53%) and N-acetylamino groups (47%) of the glycan portion.
Descriptors: Brevibacterium --metabolism--ME; *Penicillin G --pharmacology--PD; Amino Acids--analysis--AN; Brevibacterium --drug effects--DE; Hexosamines--analysis--AN; Macromolecular Systems; Muramidase; Mutation; Penicillin Resistance ; Peptidoglycan--metabolism--ME CAS Registry No.: 0 (Amino Acids); 0 (Hexosamines); 0 (Macromolecular Systems); 0 (Peptidoglycan); 61-33-6 (Penicillin G)
Enzyme No.: EC 3.2.1.17 (Muramidase) Record Date Created: 19790925

6/6/1 10700341 20245524 PMID: 10781535
A mutation in the Corynebacterium glutamicum ltsA gene causes susceptibility to lysozyme, temperature-sensitive growth, and L-glutamate production. May 2000

6/6/2 10483026 20008261 PMID: 10540747
Molecular cloning of isomaltotrio-dextranase gene from Brevibacterium fuscum var. dextranlyticum strain 0407 and its expression in Escherichia coli. Sep 1999

6/6/3 10427792 99413305 PMID: 10485295
The eff-482 locus of Sinorhizobium meliloti CXM1-105 that influences symbiotic effectiveness consists of three genes encoding an endoglycanase, a transcriptional regulator and an adenylate cyclase. Jul 1999

6/6/4 09786941 98193859 PMID: 9532680
[The role of persistence factors in the forming of a microbial biocenosis in the nasal mucosa in staphylococcal bacteria carriers]
Rol' faktorov persistentsii v formirovanii mikrobnogo biotsenoza slizistoi nosa u stafilokokkovykh bakterionositelei. Jan-Feb 1998

6/6/5 09723787 98126249 PMID: 9466773
Evaluation of the RapID CB Plus system for identification of Corynebacterium species and other gram-positive rods. Feb 1998

6/6/6 08855640 96195761 PMID: 8638937
Destruction of cholera toxin receptor on HeLa cell membrane using microbial endoglycoceramidase. Apr 1 1996

6/6/7 08411014 95175243 PMID: 7870470
Carbohydrate depletion of immunoglobulin A1 by oral species of gram-positive rods. Dec 1994

6/6/8 07873420 94010997 PMID: 8406545
An invertase with unusual properties secreted by sucrose-grown cells of Corynebacterium murisepticum. Jun 1993

6/6/9 07859264 93378714 PMID: 7764008
Production of intracellular enzyme by Corynebacterium glutamicum T6-13 protoplasts immobilized in Ca-alginate gels. Sep 1993

6/6/10 07852362 93384316 PMID: 8373194
Transglycosylation activity of endoglycoceramidase from Corynebacterium sp. Sep 1993

6/6/11 07309321 92241311 PMID: 1315273
Purification and characterization of membrane-bound endoglycoceramidase from Corynebacterium sp. Apr 15 1992

6/6/12 06790602 91106738 PMID: 2125571
Intergeneric protoplast fusion between xylanase producing Bacillus subtilis LYT and Corynebacterium acetoacidophilum ATCC 21476. Sep 15 1990

6/6/13 06541368 90226632 PMID: 2517394
A fast spheroplast formation procedure in some 2,5-diketo-D-gluconate- and 2-keto-L-gulonate- producing bacteria. May 1989

6/6/14 05115677 86185468 PMID: 3008649
Protoplast transformation in coryneform bacteria and introduction of an alpha-amylase gene from Bacillus amyloliquefaciens into Brevibacterium lactofermentum. Mar 1986

6/6/15 04757195 85148511 PMID: 3977588
Modulation of hepatocyte protein synthesis during co-cultivation with macrophage-rich peritoneal cells in vitro. Feb 1985

6/6/16 04061218 83054843 PMID: 7141330
Modification of the cell wall in Brevibacterium sp. M 27. 1982

6/6/17 03935092 82208478 PMID: 7083271
Changes in glycosidase activities and surface lectin receptors of guinea-pig alveolar macrophages activated by Corynebacterium parvum. 1982

6/6/18 03740487 82011473 PMID: 6944557
Dose, route, and time dependence of serum lysozyme and antitumor activity following administration of glucan, Corynebacterium parvum, pyran, or lipopolysaccharide to mice. Oct 1981

6/6/19 03486961 81039379 PMID: 7426303
Effect of intravenous corynebacterium parvum on peripheral-blood effector cells of cancer patients. May 1980

6/6/20 03354557 80168810 PMID: 542797
Prolonged effect of Corynebacterium parvum stimulation on granulopoiesis. Nov 1979

6/6/21 03188023 80003935 PMID: 477851
Effect of Corynebacterium parvum on serum lysozyme (muramidase) levels (author's transl)] Action du Corynebacterium parvum sur les taux de lysozyme (muramidase) serique. Jul 15 1979

6/6/22 03145808 79233141 PMID: 111745
Effect of Corynebacterium parvum on the glycosidases in guinea pig alveolar macrophages. Role of the way of introduction [author's transl)] Action de Corynebacterium parvum sur les glycosidases des macrophages alveolaires de cobaye. Influence de la voie d'introduction. Sep-Oct 1978

6/6/23 03021635 79064066 PMID: 102445
Action of Corynebacterium parvum on the activity of glycosidases and proteases of peritoneal macrophages in the mice] Action du Corynebacterium parvum sur les activites de glycosidases et de proteases des macrophages peritoneaux de Souris. Sep 11 1978

6/6/24 02767723 78096299 PMID: 601508
Immunoglobulins, complement and lysozyme in leg lymph of normal men. Dec 1977

6/6/25 02296590 76161478 PMID: 1241284
The influence of urea and guanidine chloride on the binding of the binding of the bacterial substrate and inhibitors to hen lysozyme at physiological temperature (40 degrees) (*). 1975

6/6/26 02273353 76123228 PMID: 1240194
[Enzymes of oral anaerobic bacteria capable of causing mixed infection] Jan 1975

6/6/27 02264979 76110512 PMID: 813563
[Antibacterial activity of a lysozyme-like enzyme from staphylococci] Antibakterial'naia aktivnost' lizotsimpodobnogo fermenta tafilokokkov Oct 1975

6/6/28 02065166 75127236 PMID: 164179
Diphtheria toxin: mode of action and structure. Mar 1975

6/6/29 01624062 73168557 PMID: 4701201
[Some aspects of the microbial synthesis of biologically active substances] Deiaki aspekty mikrobnoho syntezu biolohichno aktyvnykh rechovyn. Jan-Feb 1973

6/6/30 01407711 72162541 PMID: 4553313
[Lysozyme activity of bacteria] O lisotsimnoi aktivnosti bakterii. Jan 1972

6/6/31 01383275 72110388 PMID: 4551053
Studies on experimental arthritis induced by corynebacterium rubrum. 1. Localization of the arthritogenic factor in the cell walls. Jan-Feb 1972

6/6/32 01277914 72007319 PMID: 4106365
The reversibility of the adenylate cyclase reaction. Sep 25 1971

6/6/33 00913571 70107798 PMID: 4905249
Bacteriolytic spectrum of the enzyme produced by Acanthamoeba castellanii. 1969

6/6/34 00568034 68360830 PMID: 5666750
Structure of the cell wall of Corynebacterium diphtheriae. I. Mechanism of hydrolysis by the L-3 enzyme and the structure of the peptide. Aug 1968

6/8/1 DIALOG(R)File 155:MEDLINE(R) 10700341 20245524 PMID: 10781535
A mutation in the Corynebacterium glutamicum ltsA gene causes susceptibility to lysozyme, temperature-sensitive growth, and L-glutamate production. May 2000
Tags: Support, Non-U.S. Gov't Descriptors: Aspartate-Ammonia Ligase--metabolism--ME; * Corynebacterium --genetics--GE; *Glutamic Acid--biosynthesis--BI; *Muramidase--metabolism --ME; Aspartate-Ammonia Ligase--genetics--GE; Base Sequence; Cloning, Molecular; Corynebacterium --enzymology--EN; Corynebacterium --growth and development--GD; DNA, Bacterial; Genes, Bacterial; Molecular Sequence Data; Mutagenesis; Sequence Analysis, DNA; Temperature Molecular Sequence Databank No.: GENBANK/AB029550 CAS Registry No.: 0 (DNA, Bacterial); 56-86-0 (Glutamic Acid) Enzyme No.: EC 3.2.1.17 (Muramidase); EC 6.3.1.1 (Aspartate-Ammonia Ligase)

6/7/9 DIALOG(R)File 155:MEDLINE(R) 07859264 93378714 PMID: 7764008
Production of intracellular enzyme by Corynebacterium glutamicum T6-13 protoplasts immobilized in Ca-alginate gels.
Su Z; Guo Y; Peng Z
Institute of Biotechnology, South China University of Technology, Guangzhou.
Enzyme and microbial technology (ENGLAND) Sep 1993, 15 (9) p791-5, ISSN 0141-0229 Journal Code: 8003761 Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM
Record type: Completed
The glutamate dehydrogenase (GDH) (EC 1.4.1.4) productivity of the immobilized Corynebacterium glutamicum T6-13 protoplasts in Ca-alginate gels was investigated. GDH in Corynebacterium glutamicum T6-13 cells is an intracellular enzyme. The cells pretreated with 0.5 U/l-1 penicillin G were used for the preparation of protoplasts. Protoplasts were prepared by treating these cells with lysozyme at 30 degrees C for 14 h in 0.5 M NaCl solution and separating the protoplasts. Protoplasts were directly immobilized in 3% Ca-alginate gels (method I). The immobilized protoplasts could be also prepared by treating the immobilized whole cells with lysozyme (method II); this method was more convenient than method I. The GDH productivity of the immobilized protoplasts amounted to 205% of that of the free cells (intracellular). The immobilized protoplasts could be repeatedly used for at least 6 batches (18 days) and had good storage stability. Record Date Created: 19931014

6/7/16 DIALOG(R)File 155:MEDLINE(R) 04061218 83054843 PMID: 7141330
Modification of the cell wall in Brevibacterium sp. M 27.
Rytir V; Caslavska J; Konickova-Radochova M; Konicek J

Folia microbiologica (CZECHOSLOVAKIA) 1982, 27 (4) p267-8, ISSN 0015-5632 Journal Code: 0376757
Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM Record type: Completed
Record Date Created: 19830119

11/6/1 13588166 22028210 PMID: 12032806
Flexibility of the metabolism of Corynebacterium glutamicum 2262, a glutamic acid-producing bacterium, in response to temperature upshocks. Jun 2002

11/6/2 13441781 21820045 PMID: 11831479
Expression of genes of lipid synthesis and altered lipid composition modulates L-glutamate efflux of Corynebacterium glutamicum. Jan 2002

11/6/3 13167145 21603776 PMID: 11762601
H+ATPase defect in Corynebacterium glutamicum abolishes glutamic acid production with enhancement of glucose consumption rate. Nov 2001

11/6/4 12922336 21685044 PMID: 11827398
Rapid determination of underivatized pyroglutamic acid, glutamic acid, glutamine and other relevant amino acids in fermentation media by LC-MS-MS. Jan 2002

11/6/5 12900963 21626340 PMID: 11754524
Disorders of glutamate metabolism. 2001

11/6/6 12895643 21428001 PMID: 11565516
Characterization of the phosphoenolpyruvate carboxykinase gene from Corynebacterium glutamicum and significance of the enzyme for growth and amino acid production. Oct 2001

11/6/7 12709069 21557156 PMID: 11700347
Glutamate synthase of Corynebacterium glutamicum is not essential for glutamate synthesis and is regulated by the nitrogen status. Nov 2001

11/6/8 11327936 21380168 PMID: 11397813
Oxygen access to the active site of cholesterol oxidase through a narrow channel is gated by an Arg-Glu pair. Aug 10 2001

11/6/9 11192438 21217883 PMID: 11321586
Pyruvate carboxylase is a major bottleneck for glutamate and lysine production by Corynebacterium glutamicum. Apr 2001

11/6/10 11175825 21186967 PMID: 11289793
Modeling and experimental design for metabolic flux analysis of lysine-producing Corynebacteria by mass spectrometry.Apr 2001

11/6/11 11104328 21121324 PMID: 11229659
Interrelation between synthesis and uptake of ectoine for the growth of the halotolerant Brevibacterium species JCM 6894 at high osmolarity. 2001

11/6/12 11079497 21099313 PMID: 11168383
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Glutamate synthase of Corynebacterium glutamicum is not essential forglutamate synthesis and is regulated by the nitrogen status.
Beckers G; Nolden L; Burkovski A
Institut fur Biochemie der Universitat zu Koln, Zulpicher-Str. 47, D-50674 Koln, Germany.
Microbiology (Reading, England) (England) Nov 2001, 147 (Pt 11) p2961-70, ISSN 1350-0872 Journal Code: 9430468 Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM
Record type: Completed
The Corynebacterium glutamicum gltB and gltD genes, encoding the large (alpha) and small (beta) subunit of glutamate synthase (GOGAT), were investigated in this study. Using RT-PCR, a common transcript of gltB and gltD was shown. Reporter gene assays and Northern hybridization experiments revealed that transcription of this operon depends on nitrogen starvation. The expression of gltBD is under control of the global repressor protein AmtR as demonstrated by gel shift experiments and analysis of gltB transcription in an amtR deletion strain. In contrast to other bacteria, in C. glutamicum GOGAT plays no pivotal role; e.g. gltB and gltD inactivation did not result in growth defects when cells were grown in standard minimal medium and only a slight increase in the doubling time of the corresponding mutant strains was observed in the presence of limiting amounts of ammonia or urea. Additionally, mutant analyses revealed that GOGAT has no essential function in glutamate production by C. glutamicum. Record Date Created: 20011108

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L-glutamate efflux with Corynebacterium glutamicum: why is penicillin treatment or Tween addition doing the same?
Eggeling L; Krumbach K; Sahm H
Institut fur Biotechnologie, Forschungszentrum Julich GmbH, Germany. l.eggeling@fz-juelich.de
Journal of molecular microbiology and biotechnology (England) Jan 2001, 3 (1) p67-8, ISSN 1464-1801 Journal Code: 100892561 Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM
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Metabolic analysis of glutamate production by Corynebacterium glutamicum.
Gourdon P; Lindley N D
Centre National de la Recherche Scientifique-Unite Mixte de Recherche 5504, Institut National des Sciences Appliquees, Toulouse, France.
Metabolic engineering (UNITED STATES) Jul 1999, 1 (3) p224-31, ISSN 1096-7176 Journal Code: 9815657
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The dynamic behavior of the metabolism of Corynebacterium glutamicum during L-glutamic acid fermentation, was evaluated by quantitative analysis of the evolution of intracellular metabolites and key enzyme concentrations. Glutamate production was induced by an increase of the temperature and a final concentration of 80 g/l was attained. During the production phase, various other compounds, notably lactate, trehalose, and DHA were secreted to the medium. Intracellular metabolites analysis showed important variations of glycolytic intermediates and NADH, NAD coenzymes levels throughout the production phase. Two phenomena occur during the production phase which potentially provoke a decrease in the glutamate yield: Both the intracellular concentrations of glycolytic intermediates and the NADH/NAD ratio increase significantly during the period in which the overall metabolic rates decline. This correlates with the decrease in glutamate yield due in part to the production of lactate and also to the period of the fermentation in which growth no longer occurred. Record Date Created: 20000906

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[Glutamate production of coryneform bacteria] Kimura E; Kawahara Y; Nakamatsu T
Technology & Engineering Laboratories, Ajinomoto Co., Inc., Kawasaki, Japan.
Tanpakushitsu kakusan koso. Protein, nucleic acid, enzyme (JAPAN) Dec 1997, 42 (16) p2633-40, ISSN 0039-9450 Journal Code: 0413762 Document type: Journal Article; Review; Review, Tutorial
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11/7/29 DIALOG(R)File 155:MEDLINE(R) 09412228 97312540 PMID: 9168981
A dtsR gene-disrupted mutant of Brevibacterium lactofermentum requires fatty acids for growth and efficiently produces L-glutamate in the presence of an excess of biotin.
Kimura E; Abe C; Kawahara Y; Nakamatsu T; Tokuda H
Technology Laboratory, Ajinomoto Co., Inc., Kawasaki, Japan. Ted kimura@te2.ajinomoto.co.jp
Biochemical and biophysical research communications (UNITED STATES) May 8 1997, 234 (1) p157-61, ISSN 0006-291X Journal Code: 0372516 Document type: Journal Article Languages: ENGLISH
Main Citation Owner: NLM Record type: Completed

A dtsR gene encoding a homolog of the beta subunit of some biotin-containing enzymes suppresses a detergent-sensitive mutation of Brevibacterium lactofermentum (E. Kimura et al., 1996, Biosci. Biotech. Biochem. 60, 1565-1570), which has been used for the fermentative production of L-glutamate. When the dtsR gene was disrupted, the organism exhibited strict fatty acid auxotrophy; oleate or oleate ester, but not palmitate ester or stearate ester, supported the growth of the delta dtsR mutant. Immunoblotting with an anti-DtsR antibody revealed that no intact DtsR was present in the cytosol of the delta dtsR mutant. In the presence of an excess of biotin, the wild type strain did not produce L-glutamate whereas the delta dtsR mutant efficiently produced it. The mechanism underlying the efficient production of L-glutamate by the delta dtsR mutant is discussed as to the possible role of dtsR in fatty acid metabolism. Record Date Created: 19970624

11/7/30 DIALOG(R)File 155:MEDLINE(R)
09233952 97141308 PMID: 8987652
Molecular cloning of a novel gene, dtsR, which rescues the detergent sensitivity of a mutant derived from Brevibacterium lactofermentum.
Kimura E; Abe C; Kawahara Y; Nakamatsu T
Technology and Engineering Laboratories, Ajinomoto Co., Inc., Kanagawa, Japan.
Bioscience, biotechnology, and biochemistry (JAPAN) Oct 1996, 60 (10) p1565-70, ISSN 0916-8451
Journal Code: 9205717 Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM
Record type: Completed
Several strains of Corynebacterium and Brevibacterium are known for their ability to secrete large amounts of amino acids, especially L-glutamate. We focused on the mechanism of L-glutamate secretion triggered by a detergent, namely polyoxyethylenesorbitan monopalmitate (PESP). A mutant strain, AJ11060, derived from Brevibacterium lactofermentum ATCC 13869 indicates the sensitivity to PESP. A multicopy suppresser gene that compliments the sensitivity of AJ11060 to the detergent was derived from a gene library of B. lactofermentum AJ12036. A 2855-bp DNA fragment was cloned and sequenced. An open reading frame was found that coded for the rescuer gene of the sensitivity to PESP of AJ11060 and was designated dtsR. The expression of the dtsR gene in B. lactofermentum was confirmed by using anti-DtsR antibody. The deduced DtsR protein indicated significant homology with some biotin enzymes such as the beta chain of propionyl-CoA carboxylase from rat (48.3%) and human (48.7%), or a 12S chain of methylmalonyl-CoA carboxyltransferase from Propionibacterium freudenreichii (43.1%). Record Date Created: 19970227

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Set	Items	Description
S1	17541	MURAMIDASE OR LYSOZYME
S2	12169	CORYNEBACTER? OR BREVIBACTER?
S3	68	S1 AND S2

3/6/1 13821187 BIOSIS NO.: 200200450008
Antibacterial activity in four marine crustacean decapods. 2002

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L-Glutamate production by lysozyme -sensitive Corynebacterium glutamicum ltsA mutant strains. 2001

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A mutation in the Corynebacterium glutamicum ltsA gene causes susceptibility to lysozyme , temperature-sensitive growth, and L-glutamate production. 2000

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EFFECT OF GROWTH PHASE ON STABILITY OF FUMARASE ACTIVITY OF BREVIBACTERIUM -FLAVUM CELLS IMMOBILIZED WITH KAPPA CARRAGEENAN 1983

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ANTI TUMOR ACTIVITY OF INTRA LESIONALLY ADMINISTERED NOCARDIA-OPACA PREPARATIONS IN RAT AND MOUSE TUMORS A COMPARISON WITH BCG AND CORYNEBACTERIUM –PARVUM 1981

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3/6/59 02635443 BIOSIS NO.: 000067023505
LOCAL MICROWAVE HYPER THERMIA 43 CELSIUS AND STIMULATION OF THE MACROPHAGE AND THYMUS DERIVED LYMPHOCYTE SYSTEMS IN TREATMENT OF GUERIN EPITHELIOMA IN RATS 1978

3/6/60 02407401 BIOSIS NO.: 000065064444
IMMUNO ADJUVANT ACTIVITIES OF THE ENZYMATIC DIGESTS OF BACTERIAL CELL WALLS LACKING IMMUNO ADJUVANCY BY THEMSELVES 1977

3/6/61 01953057 BIOSIS NO.: 000062043159
ANTI BACTERIAL ACTIVITY OF STIMULATED GUINEA-PIG PERITONEAL EXUDATE CELL CULTURE SUPERNATES 1976

3/6/62 01696251 BIOSIS NO.: 000060026308
IN-VITRO EFFECT OF EDTA TRIS LYSOZYME SOLUTIONS ON SELECTED PATHOGENIC BACTERIA 1975

3/6/63 01599978 BIOSIS NO.: 000011099967
CHEMICAL STRUCTURE OF THE PEPTIDO GLYCAN ITS MODIFIABILITY AND RELATION TO THE BIOLOGICAL ACTIVITY 1975

3/6/64 00981855 BIOSIS NO.: 000054032058
LYSOZYME ACTIVITY OF BACTERIA 1972

3/6/65 00976284 BIOSIS NO.: 000054026484
STUDIES ON EXPERIMENTAL ARTHRITIS INDUCED BY CORYNEBACTERIUM -RUBRUM PART 1 LOCALIZATION OF THE ARTHRITOGENIC FACTOR IN THE CELL WALLS 1972

3/6/66 00761218 BIOSIS NO.: 000052121323
CONTROL OF BACTERIAL RESPIRATION BY INORGANIC ORTHO PHOSPHATE PART 2 ORTHO PHOSPHATE EFFECT AND BACTERIAL OXIDATIVE PHOSPHORYLATION 1970

3/6/67 00679355 BIOSIS NO.: 000052039347
BACTERIAL CAROTENOIDS PART 32 50 CARBON CAROTENOIDS 6 CAROTENOIDS FROM CORYNEBACTERIUM - POINSETTIAE INCLUDING 4 NEW 50 CARBON DIOLS 1970

3/6/68 00512936 BIOSIS NO.: 000051102926
SOME BIOCHEMICAL ASPECTS OF THE IMMUNE MACROPHAGE 1970

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13727151 BIOSIS NO.: 200200355972
L-Glutamate production by lysozyme -sensitive Corynebacterium glutamicum ltsA mutant strains.
AUTHOR: Hirasawa Takashi; Wachi Masaaki(a); Nagai Kazuo
AUTHOR ADDRESS: (a)Department of Bioengineering, Tokyo Institute of Technology, 4259 Nagatsuta, Midori-ku, Yokohama**Japan E-Mail: thirasaw@bio.titech.ac.jp, mwachi@bio.titech.ac.jp, knagai@isc.chubu.ac.jp
JOURNAL: BMC Biotechnology 1 (9 Cited May 5, 2002):p1-5 October 16, 2001 MEDIUM: online
ISSN: 1472-6750 DOCUMENT TYPE: Article RECORD TYPE: Abstract LANGUAGE: English
ABSTRACT: Background: A non-pathogenic species of coryneform bacteria, Corynebacterium glutamicum, was originally isolated as an L-glutamate producing bacterium and is now used for fermentative production of various amino acids. A mutation in the C. glutamicum ltsA gene caused susceptibility to lysozyme , temperature-sensitive growth, and L-glutamate production. Results: The characteristics of eight lysozyme -sensitive mutants which had been isolated after N-methyl-N'-nitro-N-nitrosoguanidine mutagenesis were examined. Complementation analysis with the cloned wild-type ltsA gene and DNA sequencing of the ltsA region revealed that four mutants had a mutation in the ltsA gene. Among them, two mutants showed temperature-sensitive growth and overproduced L-glutamate at higher temperatures, as well as the previously reported ltsA mutant. Other two showed temperature-resistant growth: one missense mutant produced L-glutamate to some extent but the other nonsense mutant did not. These two mutants remained temperature-resistant in spite of introduction of ltsA::kan mutation that causes temperature sensitive growth in the wild-type background. Conclusions: These results indicate that a defect caused by the ltsA mutations is responsible for temperature-sensitive growth and L-glutamate overproduction by C. glutamicum. The two temperature-resistant mutants seem to carry suppressor mutations that rendered cells temperature-resistance and abolished L-glutamate overproduction.
REGISTRY NUMBERS: 9001-63-2: LYSOZYME DESCRIPTORS: MAJOR CONCEPTS: Bioenergetics (Biochemistry and Molecular Biophysics); Enzymology (Biochemistry and Molecular Biophysics); Molecular Genetics (Biochemistry and Molecular Biophysics) BIOSYSTEMATIC NAMES: Irregular Nonsporing Gram-Positive Rods-- Actinomycetes and Related Organisms, Eubacteria, Bacteria, Microorganisms ORGANISMS: Corynebacterium glutamicum (Irregular Nonsporing Gram-Positive Rods) BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): Bacteria; Eubacteria; Microorganisms CHEMICALS & BIOCHEMICALS: DNA; L-glutamate--amino acid, production; lysozyme GENE NAME: Corynebacterium glutamicum ltsA gene (Irregular Nonsporing Gram-Posi tive Rods)--mutation METHODS & EQUIPMENT: complementation analysis--evaluation method; mutagenesis--detection method, genetic engineering MISCELLANEOUS TERMS: direct fermentationCONCEPT CODES: 03502 Genetics and Cytogenetics-General 10062 Biochemical Studies-Nucleic Acids, Purines and Pyrimidines 10064 Biochemical Studies-Proteins, Peptides and Amino Acids 10510 Biophysics-Bioenergetics, Electron Transport and Oxidative Phosphorylation 10802 Enzymes-General and Comparative Studies; Coenzymes 31000 Physiology and Biochemistry of Bacteria 31500 Genetics of Bacteria and Viruses BIOSYSTEMATIC CODES: 08890 Irregular Nonsporing Gram-Positive Rods (1992-)

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05727968 BIOSIS NO.: 000084076374
TRANSFORMATION OF CORYNEBACTERIUM -DIPHTHERIAE CORYNEBACTERIUM -ULCERANS CORYNEBACTERIUM -GLUTAMICUM AND ESCHERICHIA-COLI WITH THE CORYNEBACTERIUM - DIPHTHERIAE PLASMID PNG2
AUTHOR: SERWOLD-DAVIS T M; GROMAN N; RABIN M
AUTHOR ADDRESS: DEP. MICROBIOL. IMMUNOL., SCH. MED., UNIV. WASH., SEATTLE, WA 98195.
JOURNAL: PROC NATL ACAD SCI U S A 84 (14). 1987. 4964-4968. 1987 FULL JOURNAL NAME: Proceedings of the National Academy of Sciences of the United States of America
CODEN: PNASA RECORD TYPE: Abstract LANGUAGE: ENGLISH

ABSTRACT: The transfection and transformation of members of two species of pathogenic corynebacteria , Corynebacterium diphtheriae and Corynebacterium ulcerans, is described. Protoplasts were produced by treatment with lysozyme following growth in glycine, and a medium was defined on which a significant fraction of the osmotically sensitive cells were regenerated. Transfections were carried out with DNA from corynephage 782, a member of the .beta. family of converting phages, and transformations were performed with DNA of plasmid pNG2, a 9500-kDa plasmid that was isolated from an erythromycin-resistant strain of C. diphtheriae and carries the resistance gene. Strains of Corynebacterium glutamicum and Escherichia coli were also successfully transformed with pNG2 DNA. Transfection frequencies were in the range of 3-8 .times. 103 plaque-forming units/.mu.g of phage DNA, and transformation frequencies were in the range of 0.2-150 colony-forming units/.mu.g of plasmid DNA. Plasmid pNG2 replicated and was stably maintained in all transformants both in the presence or absence of erythromycin. THus, it displayed the ability to replicate in strains of both Gram-positive and Gram-negative bacteria without the intervention of genetic engineering. pNG2 DNA isolated from any of the transformed strains was able to transform all parental strains. The host range of pNG2 suggests its possible utility in or as a shuttle vector for the study and manipulation of genes from corynebacterial strains of animal origin.

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05068909 BIOSIS NO.: 000081027033
DEVELOPMENT OF L LYSINE PRODUCING STRAINS BY INTERGENERIC PROTOPLAST FUSION OF BREVIBACTERIUM -FLAVUM AND CORYNEBACTERIUM -GLUTAMICUM
AUTHOR: KYUNG K-C; LIM B-S; LEE S-Y; CHUN M
AUTHOR ADDRESS: DEP. AGRICULTURAL CHEM., KOREA UNIV.
JOURNAL: KOREAN J APPL MICROBIOL BIOENG 13 (3). 1985. 279-284. 1985 FULL JOURNAL NAME: Korean Journal of Applied Microbiology and Bioengineering CODEN: SMHAE
RECORD TYPE: Abstract LANGUAGE: ENGLISH
ABSTRACT: As a method of breeding L-lysine producing strains, the intergeneric protoplast fusion between Brevibacterium flavum and Corynebacterium glutamicum was performed. As a result, Brevibacterium flavum ATCC 21528 R showed 99% of protoplast formation and 10% of regeneration frequencies when treated with 400 .mu.g/ml of lysozyme for 12 hrs. In Corynebacterium glutamicum ATCC 21514 S, 99% and 12% were obtained by treatment of 300 .mu.g/ml lysozyme for 12 hrs. In intergeneric protoplast fusion between Brevibacterium flavum ATCC 21528 R and Corynebacterium glutamicum ATCC 21831 S, 1.0 .times. 10-6 of recombinant frequency per regenerable cells was observed by use of PEG 6000, 30% (w/v). Among the strains obtained KR43 strain showed 12% higher productivity of L-lysine than the parental cell. Then, the activity of aspartokinase of KR43 was about 13% higher than the parental cell.

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04154860 BIOSIS NO.: 000027064412
GENETIC RECOMBINATION AFTER FUSION OF PROTOPLASTS OF VARIOUS GLUTAMATE PRODUCING BACTERIA SPECIES
AUTHOR: LIVSHITS V A; SHTANNIKOV A V; ZHDANOVA N I
AUTHOR ADDRESS: ALL-UNION RES. INST. GENET. SEL. IND. MICROORG., MOSCOW, USSR.
JOURNAL: BIOL NAUKI (MOSC) 0 (11). 1982 (RECD. 1983). 97-99. 1982 FULL JOURNAL NAME: Biologicheskie NAUKI (Moscow) CODEN: BINKB RECORD TYPE: Citation LANGUAGE: RUSSIAN

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03731091 BIOSIS NO.: 000024059164
MODIFICATION OF THE CELL WALL IN BREVIBACTERIUM -SP M-27
AUTHOR: RYTIR V; CASLAVSKA J; KONICKOVA-RADOCHOVA M; KONICEK J
AUTHOR ADDRESS: INST. MICROBIOL., CZECH. ACAD. SCI., 142 20 PRAGUE 4.
JOURNAL: FOLIA MICROBIOL 27 (4). 1982. 267-268. 1982 FULL JOURNAL NAME: Folia Microbiologica CODEN: FOMIA RECORD TYPE: Citation LANGUAGE: ENGLISH